



## GENERAL INFORMATION

### STORM WATER MANAGEMENT PLAN 2007 ANNUAL REPORT Town of Belchertown

**Municipality/Organization:** Town of Belchertown

**EPA NPDES Permit Number:** MA041002

**Annual Report Number and Reporting Period:** Report #4: May 1, 2006 through April 30, 2007

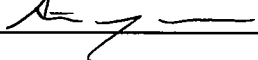
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**Self Assessment:**

*The Town of Belchertown has completed the required self-assessment and has determined that the municipality is in compliance with all permit conditions.*

**Certification:**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Signature: 

Printed Name: STEVEN J. WILLIAMS

Title: PUBLIC WORKS DIRECTOR

Date: APRIL 26, 2007



## 1.0 INTRODUCTION

The Town of Belchertown developed a Storm Water Management Plan (SWMP) to comply with the *National Pollutant Discharge Elimination system (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4)* issued jointly by the United States Environmental Protection Agency (USEPA) and the Massachusetts Department of Environmental Protection (MA DEP) (effective May 1, 2003). The Town was granted coverage under this permit (MAR041002) on September 12, 2003. The Phase II regulated area in Belchertown consists of an approximately 1.8-square mile area located in the southwest portion of the Town. The General Permit requires the Town to prepare an Annual Report. This document constitutes the Town's Annual Report and summarizes the activities conducted to satisfy the permit requirements, modifications to the plan, and activities scheduled for the upcoming year. A copy of the modified SWMP Summary is included as Appendix A.

## 2.0 PUBLIC EDUCATION AND OUTREACH

### 2.1 School Programs

As described in the SWMP, the Belchertown public school system provides numerous environmental educational programs in its curriculum. These programs will continue to be an integral part of the science curriculum and foster an appreciation for and a sense of responsibility for the environment. All schools participate in recycling programs mainly focusing on the recycling of white paper. Overall, approximately 2,500 students received environmental-related education as a regular part of the school curriculum.

### 2.2 Educational Materials Distributed

Copies of the SWMP have been distributed to the public schools and the Town library as an educational resource. The SWMP also identified numerous educational resources for students and teachers. A storm water link was created on the Town's website which includes links to a copy of the SWMP and annual reports. Additionally, a storm water flyer from the EPA was distributed town-wide in August 2006 as a newspaper insert to educate citizens about storm water and storm water pollution solutions. A copy of the flyer is included as Appendix B.

A storm water brochure was also developed in support of the Town's proposed storm water by-law. The brochure describes the storm water by-law and Low Impact Development (LID) principles. A copy of the brochure was made available on the DPW website.

### 2.3 Citizen Groups

The following local citizen groups and organizations have been identified in the SWMP that provide public education resources on storm water quality issues or could provide a public outreach avenue in developing storm water awareness and developing partnerships with the public:

- Connecticut River Watershed Council
- Pioneer Valley Planning Commission
- Tri-Lakes Association
- Belchertown Land Trust



These groups continue to provide and/or have the capacity to provide public education resources on storm water quality issues and continue to exist as support to future storm water education programs in Belchertown.

#### 2.4 Modifications to Plan

No changes to the Public Education and Outreach Components of the SWMP are proposed at this time.

#### 2.5 Activities Schedule for Next Year

Activities for Year 5 include:

- Prepare a storm water guidance document for developers. The guidance document will include examples of storm water BMPs and LID strategies to comply with the Town's proposed storm water by-law.
- Prepare and distribute outreach materials on septic system maintenance, illicit discharges, proper lawn care, yard waste and pet waste disposal, or other issues identified by the Town within the regulated area.
- Add a new link to the existing Board of Health website with guidance or recommendations on proper septic system maintenance.
- Continue existing school educational programs.

### 3.0 **PUBLIC PARTICIPATION**

#### 3.1 School Programs

Students in the Belchertown public schools are encouraged to volunteer in environmental activities over the summer vacation, in addition to after-school activities. Some of these ongoing programs include:

- An Arbor Day ceremony, maintenance of a nature trail near the school, and water quality studies of the Jabish Brook.
- An Earth Day celebration where a donated tree is planted and guest speakers discuss the importance of caring for the environment.
- Cleaning of the Chestnut Hill Middle School yard and surrounding areas in the spring.
- An annual science fair open to the public.
- An annual "Enviro-thon" as well as a community project caring for nearby vernal pools.

#### 3.2 Boy and Girl Scouts of America

Boys and girls may be involved in the Scout programs from ages 5 to 17. Scouts are involved in various community service programs and are available to assist with implementation of the Town's storm water management program.



### 3.3 Storm Water Management Committee

In 2003 the Town established a Storm Water Management Committee to develop and implement the SWMP. The Committee consists of the following Town employees and board members:

- Gary Brougham, Town Administrator
- Steven Williams, DPW Director
- LeeAnn Connoly, Conservation Commission Administrator
- Judy Metcalf, Direction of Public Health, Quabbin Health District
- Doug Albertson, Town Planner
- Paul Adzima, Building Inspector
- Ted Bock, Fire Chief

Members of the committee have met regularly between February and May 2007 to draft and discuss the implementation of a Storm Water Management By-Law and associated regulations and procedures. Additionally, a member of the community, Don Minney, has joined the Storm Water Management Committee. The Committee most recently met on April 25, 2007.

### 3.4 Public Meetings

The SWMP and Phase II Storm Water Program were presented at a Board of Selectmen's meeting on January 29, 2003. Notice of the meeting was published in a local newspaper approximately one week prior to the meeting. The presentation was taped and aired on the local public access television station. This year's annual report and previous annual reports are made available to the public on the Town of Belchertown website.

The proposed Storm Water By-law was presented at a Board of Selectmen's meeting on April 17, 2007. A public hearing for the proposed by-law was held on April 25, 2007. A Town Meeting is scheduled for May 14, 2007 to vote on the proposed by-law. The Storm Water Management Committee intends to continue to meet periodically in 2007 and 2008.

### 3.5 Modifications to the SWMP

No changes to the Public Participation components of the SWMP are proposed at this time.

### 3.6 Activities Planned for Next Year

Activities planned for Year 5 include:

- Periodic meetings of the Storm Water Committee



## **4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION**

### **4.1 Activities Conducted**

A preliminary storm sewer outfall map showing storm water outfalls within the Phase II regulated area has been prepared. The preliminary outfall map was prepared from the town's Geographic Information System (GIS) data, which includes storm drainage layers, as well as an initial outfall inventory performed by DPW staff during March 2003. Dry weather screenings of outfalls for detection of illicit discharges were performed in September and October 2006. Outfalls were inspected using an outfall reconnaissance inventory field sheet. The initial screening was conducted on September 27, 2006. On October 10, 2006 a second round of dry weather screening was conducted at locations with flow present during the September 27<sup>th</sup> round. Three locations were identified with flow present during both rounds of dry weather screening. The flows at these locations were identified as trickling. It is suspected that flow is the result of groundwater infiltration of the pipes. Copies of the ORI field data sheets from the September/October 2006 dry weather screening events are included in Appendix C.

### **4.2 Modifications to the SWMP**

No changes to the Illicit Discharge Detection and Elimination component of the SWMP are proposed at this time.

### **4.3 Activities Planned for Next Year**

Activities planned for Year 5 include:

- Perform an additional round of dry weather screening of outfalls.
- Review model illicit discharge by-law to ensure compliance with existing laws and regulations.

## **5.0 CONSTRUCTION SITE RUNOFF CONTROLS**

### **5.1 Activities Conducted**

Approximately 57 new building lots were created along existing town roads through Subdivision Approval Not Required plans. The Planning Board reviewed four (4) preliminary subdivision plans during 2006 and no definitive subdivision plans. One subdivision was completed in 2006. The Planning Board granted six (6) site plan approvals. Additionally, one housing condominium complex consisting of fourteen (14) units was approved. The Town also acquired the Clearwater Subdivision, as a result of abandonment by developers, which is located on Barton Avenue. Of these town-wide projects, approximately seven (7) are located within the Phase II regulated area including the Clearwater Ridge Subdivision.

A total of 76 projects town-wide were reviewed by the Belchertown Conservation Commission. Several of the larger projects were also reviewed by engineering consultants hired by the Town. The majority of these projects incorporated some form of storm water erosion and sediment controls to satisfy existing local and state regulatory requirements.



The Town of Belchertown has developed a Storm Water By-Law that will regulate construction and post-construction storm water runoff for new development and redevelopment projects. The proposed by-law provides a clear set of storm water management goals, standards, and design criteria to minimize the adverse impacts of storm water runoff from land development projects. The proposed by-law also promotes LID and sustainable design practices. Copies of the draft proposed by-law, associated regulations, and permit application materials are included in Appendix D of this report.

The proposed Storm Water By-Law addresses construction site runoff and erosion and sediment controls, including inspections and enforcement. Projects subject to the new by-law will be documented by the DPW (the Storm Water Authority) and by Reviewing Boards.

## 5.2 Modifications to the SWMP

At this time, no changes to the Construction Site Runoff components of the SWMP are proposed.

## 5.3 Activities Planned for Next Year

Activities planned for Year 5 include:

- Adopt and begin implementing proposed Storm Water By-Law and associated regulations.
- Provide training for Town staff responsible for reviewing site plans to determine compliance with the proposed Storm Water By-Law.
- Develop methods and materials to provide for public inquiry and comments for construction projects, and procedures to respond to public inquiry. Develop site inspection procedures.

# 6.0 POST-CONSTRUCTION STORM WATER MANAGEMENT

## 6.1 Activities Conducted

As described in Section 5.1, a number of the new development and redevelopment projects that were constructed in Belchertown during the previous year included post-construction storm water management controls to satisfy the performance standards established in Massachusetts' *Stormwater Policy Handbook*.

Specific information on the number of projects and the types of post-construction storm water management measures was not tracked this year. Activities conducted and their method of tracking will largely be determined by the regulatory mechanisms developed to address post-construction runoff controls.

The proposed Storm Water By-Law addresses post-construction storm water management and erosion and sediment controls, including inspections and enforcement. Projects subject to the new by-law will be documented by the DPW (the Storm Water Authority) and by Reviewing Boards.



## 6.2 Modifications to the SWMP

At this time, no changes to the Post-Construction Storm Water Management component of the SWMP are proposed.

## 6.3 Activities Planned Next Year

Activities planned for Year 5 include:

- Adopt and begin implementing proposed Storm Water By-Law and associated regulations.
- Provide training for Town staff responsible for reviewing site plans to determine compliance with the proposed Storm Water By-Law.
- Develop methods and materials to provide for public inquiry and comments for construction projects, and procedures to respond to public inquiry. Develop site inspection procedures.

## 7.0 **POLLUTION PREVENTION/GOOD HOUSEKEEPING**

There are no municipal facilities located within Belchertown's Phase II regulated area. Therefore, the focus of this minimum control measure is no municipal operation and maintenance activities associated with the infrastructure (e.g., roads and storm drainage system) within the regulated area. Activities at other municipally-owned facilities are also addressed in this annual report as they relate to the requirements of this minimum measure.

### 7.1 Employee Training

Nineteen Public Works staff (representing administrative, cemetery, highway, and water staff) received environmental-related training this year. The training included Environmental Compliance and Stage II Vapor Recovery training.

Storm water training for DPW and other Town employees was conducted in April 2007. The training was conducted in conjunction with annual training required by the EPA industrial storm water permit program for the highway garage and wastewater treatment plant. The training included education on goals/objectives of the Phase II program, pollution prevention for public works activities, waste management, and good housekeeping. A copy of the training handouts and employee attendance log is included in Appendix E.

### 7.2 Street Sweeping

All of the streets within the regulated area were swept at least once during the previous year. A street sweeping log has been developed by the Town to record the names of the streets swept and the amount of street sweepings recovered. A copy of this log is included in Appendix F. Approximately 90% of the roads in Belchertown were swept by the Town using a Town-owned sweeper (2005 Elgin Pelican) and approximately 1,740 yards of material were recovered. A majority of the roads that were not swept by the Town are privately-owned or State-owned. The DPW continues to follow a program for managing and disposing of street sweepings consistent with the Massachusetts solid waste regulations and applicable DEP guidance.



### 7.3 Catch Basin Cleaning

In April 2006, the Town obtained a Beneficial Use Determination (BUD) Permit from the MA DEP for the Beneficial Use of Catch Basin Cleanouts. The permit provides the Town with the following reuse options for catch basin cleanings:

- Use/disposal in accordance with the DEP Street Sweepings Policy
- Use in asphalt recycling at the Ondrick facility in Chicopee, MA
- Use as an alternative daily landfill cover.

The Town collected approximately 86 tons of catch basin cleanings in October 2006 and disposed of them at the Ondrick facility in accordance with the BUD permit. A copy of the disposal record and BUD permit is included as Appendix G.

### 7.4 Deicer Material Storage

Salt is stored at the DPW maintenance garage inside a dedicated salt storage building, constructed in 2004. Approximately 1,100 tons of salt and 1,880 yards of sand were used in the winter of 2005-2006. An estimated 3,000 gallons of deicer material was used in the Phase II regulated area over the 2006-2007 winter seasons.

### 7.5 Preventative Maintenance

DPW staff conducts weekly inspections of the stage II vapor recovery system and waste oil collection area at the highway garage. Routine preventative maintenance is also performed at the highway garage on the Town's fleet of equipment and vehicles.

### 7.6 Transfer Station

The Transfer Station and Recycling Center accepts household trash, recyclables, yard waste, waste motor oil, tires, appliances and bulky items such as furniture and mattresses. Over 1,200 tons of residential waste was collected at the Transfer Station in 2006. Approximately 509 tons of cardboard was collected, 139 tons of white goods and scrap metal, 158 tons of commingled containers, and 34 tons of CRTs/Electronics. Approximately 1,084 tons of leaves and brush were composted.

A contract with the City of Northampton has been established for residents of Belchertown to drop off certain hazardous wastes at Northampton collections areas.

### 7.7 Modification to the SWMP

At this time, no changes to the Pollution Prevention / Good Housekeeping components of the SWMP are proposed.





## 7.8 Activities Planned Next Year

Activities planned for Year 5 include:

- Conduct annual storm water pollution prevention training for Town employees at the highway garage and wastewater treatment plant as a requirement of the EPA Water Multi-Sector General Permit. Incorporate awareness training on waste oil management.
- Continue to maintain record keeping procedures for street sweeping, catch basin cleaning, deicer application and usage, and storm water BMP inspections and maintenance within the Phase II regulated area.
- Implement the inspection and maintenance schedule that has been developed for storm drainage structures and storm water BMPs within the Phase II regulated area.
- Conduct street sweeping and catch basin cleaning in the Phase II regulated area.
- Dispose of street sweepings and catch basin cleanings in accordance with MA DEP guidance and regulations, including the BUD Permit for Beneficial Use of Catch Basin Cleanouts.

## STORM WATER MANAGEMENT PLAN SUMMARY TOWN OF BELCHERTOWN

BMP ID	Minimum Control Measure Best Management Practice (BMP) Description	Permit Year	Measurable Goal	Responsible Party
<b>1</b>	<b>Public Education and Outreach</b>			
1.1	Continue existing school educational programs.	1-5	The number of students receiving storm water education as a regular part of the school curriculum. The number of programs offered.	Storm Water Committee, School Department
1.2	Provide schools with a copy of the education resources sections of the Plan. Make copies of the storm water management plan available in the Town library.	1	Distributed plan copies to the schools. Distributed plan copies to the Town library.	Storm Water Committee
1.3	Create a storm water link on the Town's website, including an electronic version of the storm water management plan.	2	Created a storm water link on the Town's website.	Storm Water Committee, MIS Department
1.4	Prepare a general storm water overview and summary of the Phase II program for distribution as a newspaper flyer, or cable access television announcement. Continue to add materials to the Town's storm water website.	3	The number of materials created and distributed or the number of storm water-related articles published. Materials added to Town website.	Storm Water Committee, School Department
1.5	Distribute outreach materials on septic system maintenance, illicit discharges, proper lawn care, yard waste and pet waste disposal, or other issues identified by the Town within the regulated area.	5	The number of materials created and distributed to Town residents.	Storm Water Committee, Board of Health, DPW
1.6	Add a new link to the existing Board of Health website with guidance or recommendations on proper septic system maintenance.	5	Provided septic system maintenance guidance materials on Board of Health website.	Storm Water Committee, Board of Health, MIS Department
<b>2</b>	<b>Public Participation/Involvement</b>			
2.1	Form a Storm Water Committee to assist in developing the Phase II storm water management plan and to coordinate implementation activities.	1	Formed a storm water committee.	Storm Water Committee
2.2	Make the storm water management plan available for public review and advertise/hold a public meeting.	1	Made plan available for public review and held public meeting in accordance with state public notice requirements.	Storm Water Committee
2.3	Continue existing school environmental outreach programs.	1-5	The number of students involved in environmental outreach programs. The number of programs offered.	Storm Water Committee, School Department
2.4	Expand Storm Water Committee to include interested citizens and other Town board members. The committee could assist the Town with recruiting and directing resources to implement recommended measures.	4	The number of additional storm water committee members recruited.	Storm Water Committee

## STORM WATER MANAGEMENT PLAN SUMMARY TOWN OF BELCHERTOWN

BMP ID	Minimum Control Measure Best Management Practice (BMP) Description	Permit Year	Measurable Goal	Responsible Party
<b>3</b>	<b>Illicit Discharge Detection and Elimination</b>			
3.1	Create a storm sewer outfall map showing storm water outfalls within the Phase II regulated area.	1	Created a storm sewer outfall map.	Storm Water Committee, DPW, MIS Department
3.2	Finalize storm outfall map and conduct dry weather outfall screening within regulated area.	3	Finalized outfall map and conducted dry weather screening of outfalls. Number of outfalls screened.	Storm Water Committee, DPW, Board of Health
3.3	Inspect outfalls with potential illicit discharges (as identified from initial dry weather screening), conduct outfall sampling, and track sources of illicit discharges.	3-5	Conducted source tracking of storm water outfalls. Identified sources of illicit discharges.	Storm Water Committee, DPW, Board of Health
3.4	Eliminate a certain number or percentage of illicit discharges whose sources are identified.	3-5	Eliminated a certain number or percentage of illicit discharges whose sources were identified.	Storm Water Committee, DPW, Board of Health
3.5	Review model illicit discharge by-law to assess its applicability and feasibility for adoption in Belchertown. Modify existing by-laws to address the illicit discharge regulatory mechanism requirement.	4-5	Reviewed, drafted, and adopted illicit discharge by-law.	Storm Water Committee, DPW, Board of Health
3.6	Educational materials developed for minimum control measure 1 (Public Education and Outreach) to address illicit discharge detection and elimination.	3-5	Disseminated educational materials (e.g. newspaper flyer) on illicit discharge detection and elimination (see BMP 1.6) to the public.	Storm Water Committee, DPW, Board of Health
<b>4</b>	<b>Construction Site Runoff Control</b>			
4.1	Review existing MADEP or other similar model by-law to assess its applicability and feasibility for adoption in Belchertown.	4	Reviewed model by-law. Held public meeting.	Storm Water Committee, Building Inspector, Planning Board
4.2	Draft and adopt a by-law with public input (draft language and legal review, conduct informational meetings as necessary, submit to warrant, schedule for vote at Town Meeting).	4-5	Drafted and adopted by-law.	Storm Water Committee, Building Inspector, Planning Board
4.3	Provide training for Town staff responsible for reviewing site plans to determine compliance with the newly adopted by-law.	5	Conducted training for Town staff.	Storm Water Committee, Building Inspector, Planning Board
4.4	Develop methods and materials to provide for public inquiry and comments for construction projects, and procedures to respond to public inquiry. Develop site inspection procedures.	5	Developed procedures for public inquiry and associated response. Developed site inspection procedures.	Storm Water Committee, Building Inspector, Planning Board

## STORM WATER MANAGEMENT PLAN SUMMARY TOWN OF BELCHERTOWN

BMP ID	Minimum Control Measure Best Management Practice (BMP) Description	Permit Year	Measurable Goal	Responsible Party
<b>5</b>	<b>Post-Construction Runoff Control</b>			
5.1	Review existing MADEP or other similar model by-law to assess its applicability and feasibility for adoption in Belchertown.	4	Reviewed model by-law. Held public meeting.	Storm Water Committee, Building Inspector, Planning Board, Conservation Commission
5.2	Draft and adopt a by-law with public input (draft language and legal review, conduct informational meetings as necessary, submit to warrant, schedule for vote at Town Meeting).	4-5	Drafted and adopted by-law.	Storm Water Committee, Building Inspector, Planning Board, Conservation Commission
5.3	Provide training for Town staff responsible for reviewing site plans to determine compliance with the newly adopted post-construction runoff control by-law.	5	Conducted training for Town staff.	Storm Water Committee, Building Inspector, Planning Board, Conservation Commission
5.4	Develop procedures for public inquiry and comments for post-construction storm water BMPs, and procedures to respond to public inquiries. Develop periodic inspection procedures.	5	Developed procedures for public inquiry and associated response. Developed inspection procedures.	Storm Water Committee, Building Inspector, Planning Board, Conservation Commission
<b>6</b>	<b>Pollution Prevention/Good Housekeeping</b>			
6.1	Expand annual storm water training program for appropriate Town employees to include street sweeping, storm water BMP and drainage system maintenance including catch basin cleaning, winter road and lot maintenance, and solid/hazardous waste management.	1	Developed expanded storm water training program.	Storm Water Committee, DPW
6.2	Develop record keeping procedures for street sweeping, catch basin cleaning, deicer application and usage, and storm water BMP inspections and maintenance within the regulated area.	2	Developed record keeping procedures.	Storm Water Committee, DPW
6.3	Conduct training for appropriate Town employees.	1-5	Conducted training. The number of employees trained.	Storm Water Committee, DPW
6.4	Sweep streets within the regulated area, as necessary, on a rotating basis.	1-5	Conducted street sweeping within regulated area. The quantity of debris collected from street sweeping.	DPW
6.5	Establish inspection and maintenance schedules for storm drainage structures and storm water BMPs within the Phase II regulated area.	3	Established inspection and maintenance schedules.	Storm Water Committee, DPW